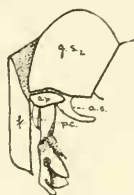


complete row or with the two dorsal bristles somewhat separated from the laterals; fourth with marginal row well anterior to posterior margin and the dorsal, central bristles still farther forward.

GENITAL SEGMENTS.—Both dull orange or first somewhat brownish: first with long, hairy vestiture posteriorly, marginal bristles absent; second polished, vestiture about length of that on first, anal area small. Forceps darker than second segment, with short upward flap-like prolongations; prongs in profile



truncated at ends and anterior corners pointed and slightly produced; vestiture short except on flap-like prolongations. The figure shows the details of the genital segments (f. = forceps, a. c. = anterior clasper, p. c. = posterior clasper, a. p. = accessory plate, g. s. 2 = second genital segment). Genitalia distinctive.

The holotype and the single paratype were both taken at Niagara Falls, New York, on June 25, but the year and the collector are not recorded.

NEW NEOTROPICAL MEMBRACIDÆ.¹

By W. D. FUNKHOUSER,

LEXINGTON, KY.

Membracis humilis Fowler, variety *aurora* new var.

This variety answers the description of *M. humilis* Fowler in every particular except that the pronotal markings are brilliant orange in color instead of white. A series of thirty-nine specimens is shown in my collection, eighteen males and eighteen females from Chosica, Peru, and three females from Ecuador. Attempts have been made to change the color of these specimens by various bleaching processes in the thought that the single specimen which Fowler described might have been faded but the color appears permanent. Since both sexes are represented and the series is a fairly long one and represents two localities, I believe this to be a constant color-variety of *humilis*.

The females are slightly larger than the males and both sexes are uniformly black in body color with the markings bright orange. The eyes are

¹ Zoological Laboratory, University of Kentucky.

bright red; the tegmina very dark brown, opaque and slightly pilose; the legs and undersurface of the body black.

All of the specimens were collected by Mr. H. S. Parish of Toronto, Canada. The specimens from Chosica were taken June 9, 1914, and those from Ecuador in August, 1914.

Type of variety: male. Type locality: Chosica, Peru.

***Leioscyta brunnea* new species.**

Dark brown, closely punctate, sparingly pubescent; dorsum nearly straight, very slightly depressed at middle and deflexed at tip; tegmina black at base, brown at middle and luteus-hyaline at tip; undersurface of body brown; legs ferruginous.

Head longer than wide, foliaceous, dark brown, finely and closely punctate, sparingly pubescent; base of head strongly sinuate with a pronounced tubercle above each ocellus; eyes small, not prominent, gray; ocelli small, pearly, farther from each other than from the eyes and situated slightly above an imaginary line drawn through centers of eyes; deep impression at base of median line of head between the tubercles; clypeus broad, flat, foliaceous, somewhat pubescent.

Pronotum uniformly dark brown, closely punctate, sparingly pubescent; metopidium sloping; dorsum nearly straight, slightly depressed and sinuate in middle, roughly sculptured; median carina percurrent, sharp and prominent; a short lateral carina on each side extending from behind humeral angles to base of posterior process; humeral angles not prominent, rounded; posterior process slightly deflexed, acute, triquerate, extending just about to tip of abdomen but not nearly reaching the extremities of the tegmina.

Tegmina black, coriaceous and strongly punctate at base, middle third dark brown and translucent, apical third yellowish and hyaline; five apical and two discoidal areas.

Undersurface of body uniform brown; legs ferruginous; first two pairs of legs weakly foliaceous, hind legs spined and pubescent, the spines tipped with black. Length, 5 mm.; width between humeral angles, 2 mm.

Type: male. Locality: Peru.

Near *L. nitida* Fowler but larger and differing in color and sculpturing of the pronotum. It is doubtful if the generic characters as laid down by Fowler for the genus *Leioscyta* will prove sufficient to distinguish this genus from *Tropidoscyta* Stal when a large number of species are examined. The two discoidal areas of the tegmina are not always associated with the elongate pronotum.

Centrogonia lutea new species.

Large, rough, yellow, coarsely punctate, sparingly pubescent; tegmina entirely free, hyaline; posterior process long, narrow, sinuatè, extending to a point half-way between tip of abdomen and apex of tegmen; suprahumeral horns thick, heavy, blunt, projecting almost directly laterad as seen from the front; abdomen yellow with segments bordered with brown; legs yellow with brown spots on middle and hind trochanters.

Head about as long as wide, very roughly sculptured, not punctate except for five large black depressions, one at base of head on median line, one on each side of base of head about half way between median suture and eye and one at upper internal angle of each eye, not pubescent except on clypeus; base of head sinuate, highly rounded in middle; eyes prominent, mottled brown, distinctly set off from lateral margins of head and extending laterad half as far as the humeral angles; ocelli prominent, pearly, bordered with reddish, about equidistant from each other and from the eyes and situated slightly below a line drawn through centers of eyes; front of head deeply sulcate down median line and just outside each ocellus and irregularly mottled with brown; genæ arcuate, flanged, with brown spot on median cephalic margin; clypeus longer than wide, extending far below inferior outline of head, convex, pilose with long silvery hairs.

Pronotum yellow in cabinet specimens, probably greenish in life, roughly sculptured, very coarsely punctate, some of the punctures brown, sparingly pilose with long bristling hairs; metopidium perpendicular, strongly hollowed out above each eye, roughly sculptured and punctate, median ridge broad and irregular; humeral angles prominent, obtuse; suprahumeral horns subcylindrical, without carinæ, heavy, blunt, extending almost directly outward as seen from the front but directed slightly backward and upward as seen from above and behind, brownish above, luteus below; dorsum nearly straight, median ridge faintly percurrent, lateral semicircular impression pronounced, a few of the coarse punctures irregularly brown especially in posterior region; posterior process long, slender, subcylindrical, luteus faintly mottled with brown, slightly deflexed, extending well beyond apex of abdomen but not reaching tips of tegmina.

Tegmina hyaline, base very slightly punctate, veins strong and yellowish.

Thorax and abdomen yellow with segments of abdomen strongly bordered with brown.

Legs yellow with middle and hind trochanters showing a large brown lateral spot.

Length including tegmina, 10 mm.; width between tips of suprahumeral horns, 4.6 mm.

Type: female. Locality: Bogota, Colombia.

I am indebted to Revdo. Apolinar Maria, Colegio de la Salle, Bogota, Colombia, for the two specimens of this species which I have

seen. Both are females and both were taken at Bogota on *Baccharis bogotensis*, one in 1915 and one in 1917. This is the largest *Centrogonia* which has yet been described. It is near *C. ciliata* Fairmaire, but is a much heavier bodied species than *ciliata* and is quite distinct in sculpturing and maculations. I have received a good series of fifty or more specimens of *C. ciliata* from Revdo. Apolinar Maria from the same locality which were also taken on *Baccharis bogotensis*.

***Centrogonia pinguicornis* new species.**

Light brown mottled with yellow, coarsely punctate, sparingly pubescent; suprahumeral horns short, thick and blunt; metapodium much depressed between the horns; head showing a large black spot mesad of each eye; dorsum highest just behind suprahumeral; posterior process slender, acute, extending just beyond tip of abdomen; tegmina hyaline; thorax, legs and abdomen light brown mottled with luteus.

Head wider than long, roughly sculptured, impunctate, light yellow with a large black or very dark brown spot just inside each lateral margin separated from the eye by a yellow line, a smaller spot meso-ventrad of the preceding, a brown line extending vertically on each side of the median line through the ocelli and along the lateral margins of the clypeus; base of head sinuate; eyes large, prominent, gray mottled with brown, well set off from lateral margin of head; ocelli prominent, brown, about equidistant from each other and from the eyes and situated on a line drawn through centers of eyes; clypeus much longer than wide, produced for more than half its length below lateral margins of genæ, convex, densely pilose, tip produced and strongly marked with black.

Pronotum light brown with yellow markings on the anterior and posterior bases of the suprahumeral horns, on the lateral margins of the semicircular impressions and across the base of the posterior process; suprahumeral horns short, very thick, stout, sub-triangular, blunt, no longer than their width at base, coarsely punctate, somewhat brown above, extending outward and upward with tips slightly recurved; metopodium perpendicular, convex below bases of horns, much flattened between the horns; dorsum a little upraised immediately behind horns then straight to tip of posterior process; median carina percurrent; posterior process narrow, acute, very slightly deflexed at tip, extending just beyond apex of abdomen but not reaching bases of terminal cells of tegmina.

Tegmina hyaline, base slightly punctate, tips somewhat wrinkled, terminal cells of coastal border often subdivided to form six or seven terminal cells, two discoidal.

Thorax light brown spotted with yellow; abdomen luteus with a small brown spot on the lateral margin of each segment; legs light brown spotted with luteus, tips of tibiæ darker, densely pilose.

Length, 6.6 mm.; width between tips of suprahumeral, 2.8 mm.

Type: female. Locality: Chosica, Peru (altitude 2,800 ft.). Collector: Parish.

Described from two females and two males collected by Mr. H. S. Parish at Chosica, Peru, on June 9, 1914. The males are slightly smaller and considerably darker than the females. This species is near *C. elegans* Fowler, but is very distinct in the shape of the supra-humeral horns and metopidium.

***Stictocephala elevata* new species.**

Large, reddish-brown, coarsely punctate, not pubescent; pronotum very high in front; lateral carinæ of metopidium not sharp and meeting almost directly above the humeral angles; tegmina yellowish hyaline, slightly coriaceous and punctate at base, veins prominent and reddish; thorax and abdomen reddish-brown; legs reddish-brown with tips of tibiæ broadly bordered with black, claws dark brown or black.

Head triangular, reddish-brown, roughly sculptured, not punctate, shining; base of head sinuate, depressed near eyes, upraised in middle; eyes large, prominent, brown; ocelli very large, yellowish, bordered with red; lower margins of genæ sinuate; clypeus very long, extending for more than two thirds its length below the inferior margin of the head, gradually narrowing toward the tip, not pubescent, impunctate, smooth, shining.

Pronotum uniformly reddish-brown, coarsely and evenly punctate, not pubescent, very high in front, highest just above humeral angles; median carina sharply and strongly percurrent; semicircular impressions distinct; metopidium perpendicular, only slightly convex, sides not sharply carinate but lateral angles meeting above at a point about on a line with the humeral angles; dorsum almost straight from top of metopidium to apex of posterior process; posterior process long, slender, acuminate, very slightly deflexed at tip, tip minutely black, extending just beyond apex of abdomen and about to the base of the apical cell of tegmen.

Tegmina yellowish-hyaline, slightly reddish, coriaceous and punctate at base; veins strong, reddish and irregularly punctate particularly in basal area.

Thorax and undersurface of body uniformly reddish-brown. Legs reddish-brown; distal ends of tibiæ broadly banded with black; claws black.

Length, 8.5 mm.; width between humeral angles, 3 mm.; height from apex of clypeus to crest of metopidium, 4.4 mm.

Type: female. Locality: Marcapata, Peru.

I have this species also from Callanga, Peru. The species of Membracidæ belonging to the genera *Ceresa* and *Stictocephala* are inclined to change color decidedly in museums. In life they are usually green or greenish which color changes to yellowish or red-

dish when dried. The specimens before me are cabinet specimens of some age and are probably much brighter and greener in life.

Stictocephala nigriventris new species.

Greenish yellow mottled with brown, coarsely punctate, sparingly pilose; abdomen densely black; suprahumeral angles very prominent suggesting undeveloped horns; lateral angles of metopidium indefinite; tegmina hyaline, veins yellowish; legs yellow, outer surfaces of trochanters and femora marked with black; general aspect of a *Centrogonia* but without horns.

Head broader than long, with perpendicular brown fascia, roughly sculptured, not punctate, not pubescent; base of head sinuate, highest in middle; eyes prominent, dark brown, extending laterad from the head almost as far as the humeral angles; ocelli small, yellowish, placed on elevations, slightly nearer to each other than to the eyes and situated about on a line drawn through centers of eyes; clypeus much longer than wide, produced for nearly two thirds its length below margins of genæ, convex, impunctate, pilose, tip black; margins of genæ strongly sinuate.

Prothorax greenish-yellow, irregularly mottled with light brown and ferruginous, deeply and evenly punctate, sparingly pilose with long stiff black hairs particularly in anterior region; humeral angles prominent, auriculate; above the humeral angles are strong rounded elevations which are not, however, produced as horns; metopidium sloping, somewhat convex, lateral angles not distinct; dorsum straight, median carina percurrent, lateral semicircular impression weak; posterior process gradually acute, tip minutely black, extending almost to tip of abdomen.

Tegmina hyaline, base slightly opaque, coriaceous and punctured, veins yellowish.

Thorax concolorous yellow; abdomen entirely black; legs yellow with outer surfaces of trochanters and femora black; claws black.

Length including tegmina, 5.5 mm.; width between humeral angles, 2.2 mm.

Type: female. Locality: Ecuador. Collector: Parish (Aug., 1914).

This species must be placed in the genus *Stictocephala* although in general appearance it strongly resembles a *Centrogonia*. It shows neither the suprahumeral horns typical of the *Centrogonia* nor the lateral angles of the metopidium characteristic of *Stictocephala*. I have this species also from Cali, Colombia, collected by Mr. Parish on May 29, 1914.

Stictolobus erectus new species.

Uniform light yellow, evenly and coarsely punctate, sparingly pilose with stiff black hairs; pronotum somewhat compressed, elevated; metopidium convex, a little higher than wide, entirely without lateral angles between humerals

and median carina; pronotum resembling that of an *Atymna*; tegmina with the venation of a *Stictocephala*; thorax, undersurface of body and abdomen immaculate light yellow; legs pale yellow with distal ends of tibiæ and the claws brown.

Head broader than long, lemon yellow, roughly sculptured, not punctate, not pubescent except on clypeus; base of head weakly sinuate, highest in middle; eyes prominent, pale yellow with perpendicular fasciæ of brown; ocelli very prominent, yellowish, bordered with brown, nearer to each other than to the eyes and situated about on a line drawn through centers of eyes; margins of genæ sinuate; clypeus longer than wide, extending for more than half its length below inferior margins of genæ, concolorous pale yellow, impunctate, pilose with long white hairs, tip slightly swollen.

Pronotum yellow, evenly punctate, sparingly pilose, somewhat compressed laterally; dorsum subarcuate, highest above humeral angles, almost straight from highest point to base of posterior process; metopidium lightly convex, higher than wide, a smooth ovate area above inner margin of each eye; median carina distinctly percurrent; semicircular impression well marked; posterior process short, slender, acuminate, extending just beyond apex of abdomen, slightly deflexed, tip minutely black.

Tegmina hyaline, base very slightly coriaceous and punctate; venation agreeing in all respects with that of species of the genus *Stictocephala*; veins prominent, yellowish, irregularly tinted with brown; tegmina and hind wings both showing a strongly stylate and petiolate apical cell.

Thorax and abdomen uniformly lemon yellow; legs yellow; tibiæ hairy and spined; distal ends of tibiæ bordered with brown; claws entirely brown.

Length, 7 mm.; width between humeral angles, 2.7 mm.; height of crest from tip of clypeus, 3.5 mm.

Type: male. Locality: Para, Brazil.

Described from two males and two females, all from the same locality. The sexes agree in size and color. I suspect that the genus *Stictolobus*, erected by Metcalf for the accommodation of *subulatus* Say, will eventually receive several species which have been described in the genus *Stictocephala*.

***Atymna pilosa* new species.**

Pale greenish yellow without markings, evenly and finely punctate, densely pilose; pronotum somewhat compressed laterally; dorsum subarcuate, highest before humeral angles; tegmina hyaline, basal half of costal area strongly punctate; thorax, legs and undersurface of body uniform greenish-yellow.

Head wider than long, very convex in center, lemon yellow with a slight tinge of brown around each ocellus, finely punctate, sparingly pubescent; base of head sinuate, depressed at lateral margins, highest over ocelli, depressed in middle; eyes large, prominent, brown, bordered with yellow; ocelli very small,

yellowish, indistinct, nearer to each other than to the eyes and situated about on a line drawn through centers of eyes; margins of genæ forming more or less of a right angle by extending straight mesad from the eyes and then turning sharply downward to the clypeus; clypeus longer than broad, extending for more than half its length below inferior margins of genæ, convex, punctate, densely pilose at tip.

Pronotum rounded in front, compressed behind, concolorous greenish yellow in cabinet specimens, evenly and finely punctate, densely pilose with long grayish hairs; dorsum subarcuate, highest before humeral angles; median carina sharp and strongly percurrent; metopidium convex, about as wide as high, a smooth rounded area at base above each eye; humeral angles prominent, auriculate; posterior process short, thick, blunt, tectiform, slightly depressed, extending almost to the tips of the tegmina.

Tegmina hyaline, very faintly clouded with brown at base and tip; base and costal area slightly punctate; veins more or less indistinct but lightly punctate in basal half of tegmen; tegmina and hind wings with apical cell stylate.

Thorax, abdomen and legs yellow, the hind tibiæ minutely spined and the spines tipped with brown.

Length, 4.8 mm.; width between humeral angles, 2 mm.

Type: female. Locality: Peru.

***Ophiderma fascipennis* new species.**

Very small, dark brown with yellow band before apex of posterior process, finely punctate, not pubescent; dorsum strongly sinuate; tegmina with prominent brown band diagonally across apex; head lightly tuberculate at base.

Head broader than long, dark brown with median line and sutures of clypeus clearly and evenly marked with yellow, finely punctate, not pubescent; base of head sinuate, the margin just above each ocellus upraised and swollen into small tubercles; eyes not prominent, brown; ocelli small, distinct, yellow, about equidistant from each other and from the eyes and situated about on a line drawn through centers of eyes; clypeus convex, finely punctate, very slightly pubescent at tip.

Pronotum broad, convex, flattened in front and somewhat swollen behind middle suggesting the genus *Xantholobus*, finely punctate, not pubescent, a broad yellow band at base of posterior process; metopidium broader than high, sloping; percurrent median carina very faint on metopidium but distinct behind middle of body; dorsum sinuate as seen from the side, a slight depression above humeral angles, a deeper one in middle of pronotum and another at base of posterior process; humeral angles prominent, triangular, auriculate, acute at point; posterior process set off at base by broad yellow fascia which is broadest on median carina and narrows rapidly as it approaches the lateral margin of the pronotum giving a triangular appearance as seen from one side, entire process short, triangular, tectiform, blunt, the tip extending well beyond the end of the abdomen but not reaching apex of tegmen.

Tegmina hyaline, base narrowly coriaceous and punctate, veins of middle area suddenly marked with brown, a distinct clean-cut brown band following the terminal veins diagonally across the apex of the wing leaving a rather broad, clear marginal membrane at extremity, this band extends ventro-caudad from the posterior process when the tegmen is folded in its natural position; both the tegmina and the hind wings show the middle apical cells stylate.

Thorax uniform brown; abdomen brown with margins of segments yellow; legs mottled yellow and brown, the distal ends of the tibiæ and the first joint of the tarsi being yellow.

Length including tegmina, 3.6 mm.; width between humeral angles, 1.8 mm. Type: male. Locality: Bolivia.

This species should be recognized by its very small size, the sinuate dorsum and the characteristic brown fascia across the apex of the tegmen. There is no record of collector, date of collecting or definite locality, as the material in which it was found was purchased from Staudinger-Bang Haas several years ago simply marked "Bolivien."

Vanduzea punctipennis new species.

Green with a semicircular white arc on each side of the pronotum, a white band at base of posterior process and a dark brown spot behind each humeral angle; closely punctate, finely pubescent; pronotum convex in front, swollen and arcuate behind; veins of tegmina strongly and closely punctate, apical cell straight at base, the basal vein of this cell extending transversely across the tegmen; legs and undersurface of body green.

Head subtriangular, broader than long, green, finely punctate, pubescent, sutures distinct; base of head nearly straight, slightly depressed at eyes; eyes prominent, brown; ocelli small, translucent, borders raised, farther from each other than from the eyes and situated about on a line extending through centers of eyes; margins of genæ sinuate; clypeus about as broad as long when viewed from the front, continuing the line of the inferior margin of the genæ, tip reflexed and pubescent.

Pronotum green, finely punctate, pubescent, a white fascia beginning just behind the humeral angles and extending in a semicircle to the lateral border of the pronotum at a point about midway between the humeral angle and the tip of the posterior process, within the anterior half of this semicircle an irregular brown spot, the white arc bordered with brown behind, a white fascia across the pronotum at the base of the posterior process; metopidium convex, broader than high; humeral angles blunt; median carina strongly percurrent; dorsum sloping in front, nearly flat across middle and acute behind, slightly impressed on each side behind the middle; posterior process darker, short, tectiform, acute, extending just beyond tip of abdomen and about reaching the base of the apical cell of the tegmen.

Tegmina hyaline, base coriaceous and punctate, apex slightly clouded; veins very strong and brown and very strongly punctate with brown dots; apical cell with basal veins at right angles to length of tegmen.

Thorax and undersurface of body uniformly green; abdomen green; legs green; tarsi luteus.

Length, 4.8 mm.; width, 2.4 mm.

Type: female. Locality: Cali, Colombia. Collector: Parish (May 24, 1914).

This species bears a strong superficial resemblance to *Vanduzeca (Hypamastris) segmentata* Fowler and may be but a variety of that species. It is quite distinct, however, from the specimens of *segmentata* which I have from Arizona and Texas and which seem to be without question Fowler's species. Fowler credits *segmentata* with a wide range and considerable variation.

Lycoderes triangulata new species.

Large, reddish-brown, coarsely punctate, not pubescent; pronotal horn porrect, subcylindrical at base, forked at extremity, the prongs of the fork narrow, flattened and parallel; posterior process slender, straight, very slightly elevated above the scutellum; tegmina reddish-brown, opaque, coriaceous and punctate except a large triangular area at costal margin near apex which is entirely hyaline and very conspicuous, suggesting the specific name.

Head foliaceous, black, finely and closely punctate, finely pubescent, convex; base of head regularly arcuate; eyes large, prominent, gray; ocelli prominent, shining, orange-colored, much farther from each other than from the eyes and situated well above a line drawn through centers of eyes; margins of genæ sinuate, extended downward to meet apical end of clypeus; clypeus longer than wide, flat, black, pubescent, punctate, continuing the outline of the head as formed by the inferior margins of genæ.

Pronotum reddish-brown, darker in front, very sparingly or not at all pubescent; single pronotal horn porrect, extending forward and upward, the base thick and turriculate, the middle portion subcylindrical, the apex forked, the forked portion being nearly as long as the distance from the humeral angles to the base of the fork, the prongs of the fork continuing the general direction of the horn, nearly parallel, not spreading, as seen from the front they are slightly separated at the bases, nearly touching throughout middle half and again slightly separated at the tips, tips a little swollen with points directed outward; humeral angles prominent, triangular, acute; posterior process long, narrow, straight, cylindrical at base, laterally flattened and sharply carinate for apical two thirds, arising from above the base of the pronotal horn and extending backward and downward to meet the tegmina against which it is closely pressed, the tip of the process not quite reaching the internal angles of the tegmina; scutellum plainly exposed, subtriangular, the open space between the scutellum and the posterior process being small, not much longer than the scutellum and not half as high as long.

Tegmina reddish-brown, opaque, coriaceous and punctate except for a large triangular area near the apex at the costal margin which is entirely clear; this triangle rests with its base on the costal margin of the wing and its apex directed upward, it extends halfway to the tip of the posterior process above and extends from near the apical end of the wing for more than one third the distance toward the base; the veins in the reddish opaque part of the tegmen are prominent and black, those in the hyaline triangle are pale and yellowish.

Thorax and undersurface of the body very dark brown or black, legs black, all of the tibiæ foliaceous, tarsi ferruginous.

Length from front of head to tip of tegmina, 6.8 mm.; length from apex of pronotal horn to tips of tegmina, 9 mm.; length of pronotal horn measuring from humeral angles, 4 mm.; width of pronotum between humeral angles, 1.8 mm.

Type: male. Locality: Sao Paulo, Brazil.

This very interesting and grotesque insect resembles *L. gaffa* Fairmaire in the shape and position of the pronotal process, but is quite distinct from that species in the structure of the posterior process. *L. triangulata* should be recognized by the hyaline triangle on the tegmina and the straight posterior process.

NEW GALL MIDGES OR ITONIDIDÆ FROM THE ADIRONDACKS.

BY E. P. FELT,

ALBANY, N. Y.

The species described below were from a fine lot of 648 pinned specimens collected in August and early September, 1917, and generously donated to the New York State Museum by Mr. Howard Notman of Keene Valley and Brooklyn, with the one exception of *Porricondyla johnsoni*, a species characterized in connection with the study of this collection.

An exceptionally large number of non-gall-making forms will be noted, a condition very likely to occur in general collections from heavily wooded areas where an abundance of moist, decaying vegetable débris favors representatives of the more generalized groups.

The midges were collected in nature much as are larger flies and there is really no reason why these minute forms should not be cap-